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EXAMINER	
PHAM, CHRYSTINE	

ART UNIT	PAPER NUMBER
2192	

DATE MAILED: 04/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/894,331	HEJLSBERG ET AL.	
	Examiner	Art Unit	
	Chrystine Pham	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,8,10-12,16-20,22-24,26 and 27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,8,10-12,16-20,22-24,26 and 27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 9th 2006 has been entered.

2. This action is responsive to Amendment filed on February 9th 2006. Claims 1, 16, and 27 have been amended. Claims 6, 7, 9, 13-15, 21, 25, 28-43 have been canceled. Claims 1-5, 8, 10-12, 16-20, 22-24, 26, and 27 are presented for examination.

Preliminary Matters

3. It should be noted that the final rejection of claim 27 under 35 USC 101 for being directed to non-statutory subject matter, established in the final Office Action, has not been addressed and/or amended by Applicants. Thus, this rejection is maintained and reproduced here for completeness.

Response to Arguments

4. Applicant's arguments with respect to claim 9 (Remarks, page 6) (i.e., Call as being improper reference under 35 USC 103) have been considered but are moot in view of the

new ground(s) of rejection.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claim 27 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 27

Claimed as "a computer readable medium storing computer executable instructions for a method for parsing XML ...", it is considered nonstatutory since the claimed "medium" is not limited to **tangible** media. The specification defines "computer readable medium" as including **intangible media** such as carrier waves incapable of being touched or perceived absent of the tangible medium through which they are conveyed (see Specification, dated June 28th 2001: *computer readable media, communication media*, page 26 lines 25-26; *communication media, carrier wave* page 27 lines 2-4).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject

matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-5, 8, 10-12, 16-20, 22-24, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Call (US 2002/0143521 A1, hereinafter *Call*) in view of Houben et al. (US 2002/0147745), hereinafter, *Houben et al.*.

Claim 1

Call teaches a computer system for parsing XML (see at least FIG.1 & associated text), the system comprising:

- A scanner that parses an XML stream (see at least *DOM interface 145, SAX interface 141* FIG.1 & associated text; *parsing, XML, sequence of nodes, DOM* paragraph [0014]; FIG.5 & associated text) to locate at least one XML token associated with an XML item (see at least *SAX, character text tokens* paragraph [0072]);
- A reader that selectively pulls the XML item from the XML stream (see at least *DOM, SAX, item/field addressing mechanism* paragraph [0072]); and
- A retriever that retrieves information associated with the pulled XML item (see at least *client program, DOM, XML* paragraph [0072]).

Call does not expressly disclose the retriever exposes data model and/or Infoset information associated with the pulled XML item. However, *Houben et al.* disclose a method of parsing XML (e.g., see *DOM, XML parser* para.[0015]) wherein the retriever exposes data model and/or Infoset information associated with an XML item (e.g., see *DOM, internal data structure 1805, infoset* para.[0055]). *Call* and *Houben et al.* are analogous art because they are both directed to

XML parsers. It would have been obvious to one of ordinary skill in the pertinent art at the time the invention was made to incorporate the teaching of *Houben et al.* into that of *Call* for the inclusion of exposing the Infoset information. And the motivation for doing so would have been to enable manipulation of the XML document (e.g., adding and deleting nodes and leaf elements of the XML document) by software objects (via exposed methods for operation on the infoset such as add and delete methods) (e.g., see *add method 1815, delete method 1820* para.[0055]).

Claim 2

The rejection of base claim 1 is incorporated. *Call* further teach the XML item is one of a start token, an end token, markup, content, an entity reference, an external reference, an element, a tag, a character data, an attribute, a CDATA section, a comment and a processing instruction (see at least *Element 505, Content 513, Stag 511, Etag 515, Attribute 522, Comment 523, PI 525* FIG. 5 & associated text; *character data, XML* paragraph [0068]).

Claim 3

The rejection of base claim 1 is incorporated. *Call* further teach a checker that determines whether the pulled XML item is well-formed (see at least *well-formed XML documents, XML production rules* paragraph [0073]; *well formed XML documents, XML grammar, production rules* paragraphs [0327]-[0328]; paragraph [0347]; *error messages, failure to parse document, well formed* paragraph [0351]).

Claim 4

The rejection of base claim 1 is incorporated. *Call* further teach a validator that determines whether pulled XML item is valid (see at least *Schema 128, Schema Interpreter 129* FIG.1 & associated text; *XML document, validated, XML schema* paragraph [0073]).

Claim 5

The rejection of base claim 1 is incorporated. *Call* further teach the scanner facilitates navigating a virtual node in a stream of XML nodes (see at least *DOM interface 145, SAX interface 141* FIG.1 & associated text; *parsing, XML, sequence of nodes, DOM* paragraph [0014]; FIG.5 & associated text; *DOM, SAX, item/field addressing mechanism* paragraph [0072]), and resolves an external reference in the XML stream (see at least *URIs, tokenized text strings* paragraph [0075]).

Claim 8

The rejection of base claim 1 is incorporated. *Call* further teach where the reader selectively pulls an XML node from the stream of XML nodes based, at least in part, on data provided to the reader by a parse requestor (see at least *DOM, SAX, item/field addressing mechanism, client program, XML* paragraph [0072]).

Claim 10

The rejection of base claim 3 is incorporated. *Call* further teach the checker determines whether the pulled XML item is well-formed base, at least in part, on comparing the pulled XML item to one or more syntax documents (see at least *well-formed XML documents, XML*

production rules paragraph [0073]; *well formed XML documents, XML grammar, production rules* paragraphs [0327]-[0328]; paragraph [0347]; *error messages, failure to parse document, well formed* paragraph [0351]).

Claim 11

The rejection of base claim 4 is incorporated. *Call* further teach the validator determines whether the pulled XML item is valid base, at least in part, on comparing the XML item to one or more DTD, schema, and external data representation documents (see at least *Schema 128, Schema Interpreter 129* FIG.1 & associated text; *XML document, validated, XML schema* paragraph [0073]; *XML Schema, DTD* paragraph [0115]).

Claim 12

The rejection of base claim 1 is incorporated. *Call* further teach where at least one of the scanner, the reader and the retriever is an object (see at least *DOM, API* paragraph [0074]).

Claim 16

Call teach a computer-implemented method for parsing XML, the method comprising:

- Instantiating a pull model parser (see at least *client program, DOM, XML* paragraph [0072]);

Call do not expressly disclose establishing a state (i.e., initial state position) associated with the pull model parser, that is to say, having associated a state machine with the pull model parser. However, these features are deemed to be inherent in the teaching of *Call* because a computing

device or a computer where the parser resides is considered to be a state machine associated with the parser wherein each machine instruction [received from the parser code] is input that changes (i.e., updating or repositioning) one or more states (i.e., established initial state position) and may cause other actions/events to take place. Furthermore, each computer's data register stores a state. The ROM from which a boot program is loaded stores a state (the boot program itself is an initial state). The operating system is itself a state and each application (i.e., parser) that runs begins with some initial state that may change as it begins to handle input (i.e., XML stream). Thus, in view of the forgoing discussion, *Call* clearly teach

- Establishing a state (i.e., initial state position within the state machine), that is to say, having associated the state machine with the pull model parser (see at least *client program, DOM, XML* paragraph [0072]);
- Accepting a parse request (see at least *client program, DOM, XML* paragraph [0072]);
- Selectively pulling an XML item based, at least in part, on the parse request (see at least *client program, DOM, XML* paragraph [0072]); and
- Updating the state based on the selectively pulled XML item (see above discussion).

Call does not expressly disclose the retriever exposes data model and/or Infoset information associated with the pulled XML item. However, *Houben et al.* disclose a method of parsing XML (e.g., see *DOM, XML parser* para.[0015]) wherein the retriever exposes data model and/or Infoset information associated with an XML item (e.g., see *DOM, internal data structure 1805, infoset* para.[0055]). *Call* and *Houben et al.* are analogous art because they are both directed to XML parsers. It would have been obvious to one of ordinary skill in the pertinent art at the time the invention was made to incorporate the teaching of *Houben et al.* into that of *Call* for the

inclusion of exposing the Infoset information. And the motivation for doing so would have been to enable manipulation of the XML document (e.g., adding and deleting nodes and leaf elements of the XML document) by software objects (via exposed methods for operation on the infoset such as add and delete methods) (e.g., see *add method 1815, delete method 1820* para.[0055]).

Claims 17-20

Claims recite limitations, which have been addressed in claims 3, 10, 4, and 11 respectively, therefore, are rejected for the same reasons as cited in claims 3, 10, 4, and 11.

Claim 22

The rejection of base claim 16 is incorporated. *Call* further teach where instantiating the pull model parser comprises:

- Associating a stream with the pull model parser (see at least *client program, DOM, XML* paragraph [0072]); and
- Initializing a scanner adapted to facilitate navigating within the stream (see at least *client program, DOM, XML* paragraph [0072]).

Claim 23

The rejection of base claim 16 is incorporated. Claim recites limitations, which have been addressed in claim 16, therefore, is rejected for the same reasons as cited in claim 16.

Claim 24

The rejection of base claim 16 is incorporated. *Call* further teach where selectively pulling an XML item further comprises:

- Positioning a virtual node over an XML node within a stream of input XML nodes (see at least *client program, DOM, XML, SAX, item/field addressing mechanism* paragraph [0072]); and
- Selectively extracting an XML item from the XML node over which the virtual node is positioned (see at least *client program, XML, DOM, SAX, item/field addressing mechanism* paragraph [0072]); and
- Resolving an external reference in the XML item (see at least *URIs, tokenized text strings* paragraph [0075]).

Claim 26

The rejection of base claim 16 is incorporated. Claim recites limitations, which have been addressed in claim 16, therefore, is rejected for the same reasons as cited in claim 16.

Claim 27

Call teach a computer readable medium storing computer executable instructions for a method for parsing XML, the method comprising:

- Operably connecting a pull model parser and a state machine (see *state machine* claim 16);
- Establishing an initial state in the state machine (see *state position* claim 16);
- Accepting a parse request (see claim 16);

- Selectively pulling an XML item identified in the parse request (see claim 16);
- Maintaining the state machine in response to one or more events associated with parsing and/or pulling the pulled XML item (see claim 16);
- Checking the pulled XML item to determine whether it is well-formed (see at least *well-formed XML documents, XML production rules* paragraph [0073]; *well formed XML documents, XML grammar, production rules* paragraphs [0327]-[0328]; paragraph [0347]; *error messages, failure to parse document, well formed* paragraph [0351]); and
- Checking the pulled XML item to determine whether it is valid (see at least *Schema 128, Schema Interpreter 129* FIG.1 & associated text; *XML document, validated, XML schema* paragraph [0073]).

Call does not expressly disclose the retriever exposes data model and/or Infoset information associated with the pulled XML item. However, *Houben et al.* disclose a method of parsing XML (e.g., see *DOM, XML parser* para.[0015]) wherein the retriever exposes data model and/or Infoset information associated with an XML item (e.g., see *DOM, internal data structure 1805, infoset* para.[0055]). *Call* and *Houben et al.* are analogous art because they are both directed to XML parsers. It would have been obvious to one of ordinary skill in the pertinent art at the time the invention was made to incorporate the teaching of *Houben et al.* into that of *Call* for the inclusion of exposing the Infoset information. And the motivation for doing so would have been to enable manipulation of the XML document (e.g., adding and deleting nodes and leaf elements of the XML document) by software objects (via exposed methods for operation on the infoset such as add and delete methods) (e.g., see *add method 1815, delete method 1820* para.[0055]).

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chrystine Pham whose telephone number is 571-272-3702. The examiner can normally be reached on Mon-Fri, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on 571-272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CP
April 16, 2006

TUAN DAM
SUPERVISORY PATENT EXAMINER